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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,316	07/26/2006	Souichi Iwasa	AI-423NP	4729
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RABIN & Berdo, PC 1101 14TH STREET, NW SUITE 500 WASHINGTON, DC 20005				
EXAMINER				
BOEHLER, ANNE MARIE M				
ART UNIT		PAPER NUMBER		
3611				
MAIL DATE		DELIVERY MODE		
10/18/2011		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/587,316

**Applicant(s)**

IWASA ET AL.

**Examiner**

ANNE MARIE BOEHLER

**Art Unit**

3611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 March 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 5) ☒ Claim(s) 1-20 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1-20 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

1. Claims 1-10 and 15-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant has amended the claims to indicate the first power transmission faces flatten at a slower rate than the second transmission faces to further define his invention. However, this recitation is not described in applicant's original detailed disclosure.

2. Claims 11-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant currently claims an elastic member with first and second faces and a plurality of engagement arms extending radially from a circumferential surface of the elastic member "wherein the first face and the second face are located on the circumferential surface of the elastic member." However, as disclosed, it appears that applicant's faces are located on the engagement arms, not on the circumferential surface of the elastic member. Applicant's recent amendment makes the claim less clear.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5, and 8-10, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over JA 2002-145083 to Tanaka et al. in view of JA 2003-13989.

JA'083 shows a power steering system 1 with a steering electric motor 11 having an output shaft 21, a speed reduction mechanism 13, 14, with an input shaft 23, and a power transmission joint that couples the input and output shafts. The joint includes a first annular engagement member 31, a second annular engagement member 32, and an elastic member 33 with an annular main body and engagement arms between the engagement members. Power transmission faces of the engagement arms engage engagement projections on the engagement members.

JA '083 fails to specifically disclose differences in the size of engagement surfaces or differences in thickness or spacing of the engagement arms or projections. However, mechanical systems are not perfectly manufactured and will include differences among parts, even those designed to be essentially the same in configuration. Also, JA 2003-013989 shows an elastomeric member 17 in a power transmission joint that includes an annular main body 17b with projecting arms 17a and opposite faces of the arms have different engagement surfaces. Therefore, it would have been obvious to one of ordinary skill in the art to manufacture the engagement arms and projections of the JA '083 device with differences in surface configuration, as taught by JA 2003-013989, in order to provide progressive resistance to movement in between the shafts. It would also have been obvious to provide differences in

thickness, and angular spacing, in order to avoid unnecessary difficulty and expense in manufacturing.

5. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over JA '083 and JA 2003-13989 as applied to claims 1-5, 8, and 9 above, and further in view of Byrom (USPN 2,135,634).

The combination fails to teach cam surfaces on the engagement projections and the engagement arms.

Byrom teaches providing cam surfaces (curvature of the edges of the projections 14 and radial arms 20, as described in col2, lines 20-23), that can cause compression of the elastic member during axial movement of the engagement members.

It would have been obvious to one of ordinary skill in the art to provide the combination joint with cam surfaces on the engagement arms and engagement projections, as taught by Byron, in order to minimize friction and wear when the elastic member runs out of alignment.

6. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over JA 2002-145,083 in view of Ricefield (USPN 2,034,001).

JA '083 shows a power steering system 10 with a steering electric motor 130 having an output shaft 31, a speed reduction mechanism 35, 36, with an input shaft 32, and a power transmission joint 44 that couples the input and output shafts. The joint includes a first annular engagement member 41b, a second annular engagement member 42b, and an elastic member 40 with an annular main body and engagement

arms between the members. Power transmission faces of the engagement arms engage engagement projections on the engagement members.

JA '083 fails to show the engagement arms increasing is width from the first face to the second face.

Ricefield shows a coupling including a first annular engagement member 45 with a first plurality of projections 45a, a second annular engagement member 46 with a plurality of projections 46a, and an elastic member 50 with first and second faces connected to the first and second engagement members, and a plurality of engagement arms 50a extending radially into engagement with the engagement members. Each arm of the elastic member increases in width from the first face 45c to the second face 46c (as clearly seen in Figure 1).

It would have been obvious to one of ordinary skill in the art to provide tapered engagement arms on the elastic member of JA '083, as taught by Ricefield, in order to provide free movement between the shafts while restraining the elastic member against endwise movement with respect to one coupling member.

7. Claim 16, 19 and 20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
8. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.
9. Applicant's arguments filed 3/10/2011 have been fully considered but they are not persuasive.

Applicant has amended claim 1 to recite first power transmission faces that flatten at a slower rate than second power transmission faces and points to para [0053] for support for this recitation. However, para [0053] does not describe faces that flatten at different rates, but rather faces that have different interference fits so that even if the elastic member 43 flattens over time, interference d1 still provides adequate power transmission. The examiner maintains there is insufficient support for the amended claim language and it is not clear how this language further defines the claims.

Claim 13 has been amended to recite first and second surfaces located on the circumferential surface of the elastic member. However, as indicated above, the faces are on the engagement arms, not directly on the circumferential surface, therefore, this amendment makes the claim unclear rather than better defining the subject matter.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANNE MARIE BOEHLER whose telephone number is (571)272-6641. The examiner can normally be reached on 7:30-5:00, Monday-Friday, with work at home on Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley Morris can be reached on 571-272-6641. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Anne Marie M Boehler/  
Primary Examiner, Art Unit 3611

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